

**THIS PAGE IS INSERTED BY OIPE SCANNING
AND IS NOT PART OF THE OFFICIAL RECORD**

Best Available Images

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

BLACK BORDERS

TEXT CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT

BLURRY OR ILLEGIBLE TEXT

SKEWED/SLANTED IMAGES

COLORED PHOTOS HAVE BEEN RENDERED INTO BLACK AND WHITE

VERY DARK BLACK AND WHITE PHOTOS

UNDECIPHERABLE GRAY SCALE DOCUMENTS

**IMAGES ARE THE BEST AVAILABLE
COPY. AS RESCANNING *WILL NOT*
CORRECT IMAGES, PLEASE DO NOT
REPORT THE IMAGES TO THE
PROBLEM IMAGE BOX.**

PULP&PAPER



A Paperloop Publication

August 2003

MID-YEAR OUTLOOK

NAVIGATING ROUGH WATERS

paperloop

August 2003

MAINTAINING MILLS

A SPECIAL TECHNOLOGY REPORT

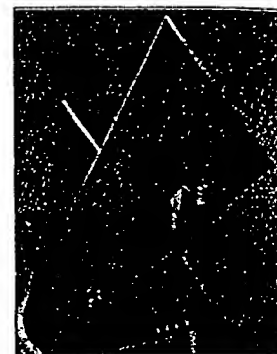


Doctor blades

Essco offers a full line of high-performance doctor blades that can increase productivity and save mills money. Essco blades include various metal alloys, plastics, abrasive blades, and the Fiberline family of products. Essco's synthetic blades include several premium epoxy-based fiberglass and carbon fiber products, which have been developed to meet specific needs by the company's in-house laminating division. Fiberline AC and Fiberline AC3 carbon fiber doctor blades are designed to improve blade life, reduce roll wear, and reduce maintenance costs.

Essco Inc.

www.esscoincorporated.com



Blade holder

Essco's ETUniform blade holder provides uniform blade pressure along the entire length of the holder. This provides even cross-machine blade loading on the roll, which results in highly efficient doctoring. The ETUniform holder consists of a heavy-duty, extruded mounting base assembly that is precisely machined and a double pressure plate assembly for long service life and durability. All metal components and fasteners are 316L stainless steel. Essco's investment-cast blade retainers minimize maintenance and are intended to extend pneumatic tube life.

Essco Inc.

www.esscoincorporated.com

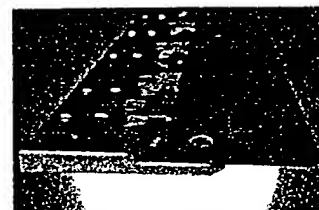


Blade holder

The RJGIII holder is a rigid holder made with a 316L stainless steel top plate and 316L cast stainless steel blade retainers that include a proprietary release coating agent. The RJGIII holder is designed for use in applications where foreign particle buildup occurs inside conventional holders, which can cause difficult blade changes. The open design of this holder is formulated to minimize surface area for buildup, simplifying blade changes and reducing holder maintenance. The RJGIII holder can be supplied with new doctors or easily retrofitted on virtually any existing doctor.

Essco Inc.

www.esscoincorporated.com



Double doctors for suction rolls

Mills can improve their moisture profile, sheet consistency and production efficiency with Essco TwinFlex double doctors for couch rolls, suction rolls, and blind drilled rolls. A double doctor is also intended to extend roll life and reduce roll maintenance costs. TwinFlex doctors use the efficient ETUniform blade holder and can run either standard doctor blades or a foil blade in the lead position. Depending on machine configuration, a TwinFlex doctor can often be designed to also function as a save-all pan, reducing capital expenditures.

Essco Inc.

www.esscoincorporated.com

